Data Discovery using Tableau

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Information and Communication Technology

Marwadi University, Rajkot
Faculty of Technology

"DATA DISCOVERY WITH TABLEAU" is an event organized by the Data Science Club at MA 115 on 25/03/2023. It was hands-on training session which covered basic tutorial of Tableau, data visualization and creating a dashboard.

The flow of the event is as follows:

1. What is Tableau?

Tableau is a powerful and fastest growing data visualization tool. t helps in simplifying raw data in a very easily understandable format. Tableau helps create the data that can be understood by professionals at any level in an organization. It also allows non-technical users to create customized dashboards.

2. Uses of Tableau:

Usage of Tableau software are listed below:

- Business Intelligence
- Data Visualization
- Data Collaboration
- Query translation into visualization
- To create no-code data queries
- Real-time data analysis
- To manage large size metadata
- To import large size of data

Ever since it was introduced, this data visualization tool is used for the Business Intelligence industry. Organizations like Amazon, Walmart, Accenture, Lenovo, and so on widely use Tableau.

3. What is Data Visualization in Tableau?

- Data Visualization is a pictorial representation of a dataset or information using maps, graphs, charts, and other visual elements.
- Data Visualization helps in easy understanding of the trend, insights, patterns, and other connections in a Dataset.

4. How does Tableau work?

- The major work of Tableau software is to connect and extract the data stored in various places.
- It can pull data from any platform.
- Tableau can extract data from any database, beat Excel, PDF, Oracle, or even Amazon web Services.
- Once Tableau is launched, ready data connectors are available which allow you to connect to any database.
- The data extracted can be connected live to the Tableau data engine, Tableau Desktop.
- This is where Data Engineer works with the data that was pulled up and develop visualization.
- The created dashboards are shared with users in the form of static files. The users receiving dashboards view the files using Tableau Reader.

- The data extracted from Tableau Desktop can be published to Tableau server which is an enterprise platform where collaboration, distribution, governance, security model, and automation features are supported.
- Using Tableau Server, end users can access the files from all locations, be it a desktop or a mobile phone.

5. Tableau vs Excel

- Excel and Tableau are data analysis tools, but both have a unique approach to data exploration.
- Where Excel works with columns and rows in spreadsheets, Tableau explores the Excel data using its drag-and-drop feature.
- It formats the data in graphs and pictures that are easy to understand.

Tableau	**MS Excel**
Tableau is basically a data visualization tool which provides pictorial and graphical representations of data.	Excel is basically a spreadsheet for working with data in rows and columns. You need to first represent your data into a tabular format and then you can apply visualizations on top of it.
In Tableau, you can gain insights that you never thought possible. You can play with interactive visualizations, deploy data drilling tools, and explore various data that is available, and you don't need to have any specific knowledge of the insight you are looking for.	When it comes to Excel, you need to have a prior knowledge of the insight that you want and then work with various formulae in order to get there, along with that tabulation is also needed.
With Tableau, it is all about an easy and interactive approach.	In Excel, you need to have some programming in order to come up with real-time data visualization.

6. Dashboard VS Report

- Dashboards and reports can work together to give a comprehensive view of trends and insights, but they are different.
- Dashboards can be updated in near-real time using cloud-based technology.
- Reports, on the other hand, are static—they offer detail, but the end user must extract insights from a compilation of data.
- They tend to be visual and interactive, allowing the user to engage with the information and create their own analysis.

7. Web scraping

- Web scraping is data scraping used for extracting data from websites.

- While web scraping can be done manually by a software user, the term typically refers to automated processes implemented using a bot.
- It is a form of copying in which specific data is gathered and copied from the web, typically into a central local database, for later analysis .
- Scraping a web page involves fetching it and extracting from it.
- An example would be finding and copying names and telephone numbers, companies and their URLs, or e-mail addresses to a list (contact scraping).

Photos:

➢Committee member involved:

- Introduction of the event: Kush Jadav
- Dataset explanation: Dhruvi Pandya & Dharmi Javiya
- Tableau explantation : Vraj Pithwa & Niva Rathod
- General Management and Assisting Participants: Shruti Nathavani, Binti Bhatt
- Outro of event and general information about club: Shruti Nathavani

List of participants

Table 1-1

Sr. No.	Student Name	Roll No.	Branch	Semester
1	Makwana Bhumika	92200133039	B.Tech ICT	2
2	Dhruvi Patel	92200133029	B.Tech ICT	2
3	Maheshwari Bhadreshwanta	92200133015	B.Tech ICT	2
4	Keval Behera	92100133033	B.Tech ICT	4
5	Rajvi Dave	92200133038	B.Tech ICT	2
6	Riddhi Sonavane	92100103181	B.Tech ICT	4
7	Krupesh Vachani	92100103102	B.Tech ICT	4
8	Ritesh Sanchala	92200133001	B.Tech ICT	2
9	Nandini Lashkari	92200133037	B.Tech ICT	2
10	Dhruvi Bhalodiya	92200133041	B.Tech ICT	2
11	Vivek Chavda	92200133026	B.Tech ICT	2
12	Fenil Vadher	92200133023	B.Tech ICT	2
13	Diya Kaneriya	92200133034	B.Tech ICT	2
14	Meet Savaliya	92210133009	B.Tech ICT	4
15	Manshi Ramani	92210133004	B.Tech ICT	4
16	Harshil Bhatt	92210133007	B.Tech ICT	4
17	Prince Kakkad	92210133013	B.Tech ICT	4
18	Jainil Padmani	92210133010	B.Tech ICT	4
19	Rushabh Patadiya	92210133005	B.Tech ICT	4
20	Ajoy Kuri	92000151011	B.Tech ICT	6
21	Trinoy Saha	92000151012	B.Tech ICT	6
22	Mann Desai	92000151008	B.Tech ICT	6
23	Mayurdhvajsinh Jadeja	92000133001	B.Tech ICT	6
24	Arshdeep Singh	92100133012	B.Tech ICT	4
25	Aryan Langhanoja	92200133030	B.Tech ICT	2
26	Mustafa Bharmal	92100133078	ICT	4
27	Vrajkumar Nandwana	92200133018	ICT	2
28	Rutik Parmar	92100133063	ICT	4
29	Darshit Parmar	92100133062	ICT	4

Table 1-2

30	Jay Lekhani	92210133011	ICT	4
31	Dhruvi Kothari	92100133067	ICT	4
32	Deep Bhalsod	92100133072	ICT	4
33	Harshit Kednoni	92100137026	ICT	4
34	Dharmi Javiya	92100133058	ICT	4
35	Dhara Kariya	92100133051	ICT	4
36	Binti Bhatt	92000133015	ICT	6
37	Shruti Nathavani	92000133030	ICT	6
38	Vraj Pithara	92100133026	ICT	4
39	Niva Rathod	92100133086	ICT	4
40	Kush Jadav	92000133012	ICT	6
41	Khushi Pandya	92100133054	ICT	4

Link of the submitting Questions :
https://forms.gle/GG1vt7gEDPb8wB2o7